Healthcare Data Crunch

Quantifying the benefits of accurate data in an electronically enabled supply chain

GS1 Australia

The Australian Healthcare Industry Data Crunch report was commissioned by industry under the auspices of the National E-Health Transition Authority (NEHTA) Supply Chain Reform Group (SCRG) which helps drive the NEHTA Supply Chain Reform Programme.

Data synchronisation was a primary focus in the NEHTA Supply Chain Reform Programme starting with the deployment of the National Product Catalogue (NPC) in 2006. Hosted on GS1net, GS1 Australia's Global Data Synchronisation Network (GDSN) compliant platform, the NPC uses the GS1 Global Trade Item Number (GTIN) as the primary identifier for all products at all levels of packaging.

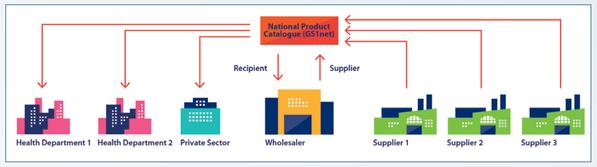

Diagram 1: NPC data flows

Seven years after the deployment of the NPC, the healthcare sector has seen a slowly increasing consistency and accuracy of product data.

THE PARTICIPANTS

Participants represent all functions within the healthcare supply chain. The supplier and jurisdiction sizes varied ensuring all organisations were represented on both sides of the trading relationship.

Role	Approx. number of orders/month	NPC status[1]
Buyer	3,235	Integrated
Buyer	850	Integration project in progress
Buyer	900	Integration project in progress
Buyer	12,500	Integrated
Supplier	4,500	Data loaded
Supplier	47,000	Data loaded
Supplier	3,500	Data loaded

Table 1. Study participants

These organisations currently trade with each other to varying degrees, as detailed in Diagram 2. Each buyer represents up to 20% of their supplier's total sales volumes.

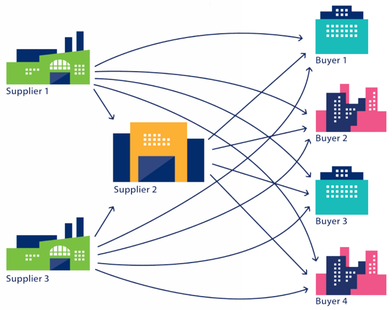

Diagram 2: Data Crunch participant trading relationships

BUSINESS PROCESSES ANALYSED

Procurement

The vendor item code is the supplier's internal reference number or internal product number allocated to identify a particular product. Net content and unit of measure describe the amount of the product contained in a package.

Results showed a minimum match of 28.6% and maximum match of 100%. Matching varied from 0% to 99.6% for the two fields; feedback indicates this is significant improvement on pre-NPC accuracy.

Potential cost of manual checking of unit of measure

Participants indicated that their suppliers' customer services teams normally receive orders, review the total value and associated vendor item code, then divide the total by the number of items ordered to determine which unit of measure is being ordered.

Potential cost of urgent deliveries due to undersupply

It was reported that at least once a month there is a need to place an emergency delivery order due to undersupply, costing approximately $1,000 for each shipment to a regional location.

External Logistics

Shipping goods between trading partners requires all parties to have accurate weights and dimensions for the products being shipped. The gross weight of the product, the dimensions, height, width and depth of the trade item[2] were studied. Findings indicated some participants could not provide product gross weight and dimensions data.

Costs of measuring weights and dimensions

Each part of the healthcare supply chain independently measures the same products to collect weights and dimensions data of the same items.

Reimbursement of Prostheses

As specified by the Private Health Insurance Act 2007, mandatory benefits included on the Prostheses List must be paid by private health insurers to hospitals using these items[3]. All products are identified with a Prostheses Rebate or Billing Code (PRC). Both public and private hospitals require a link between products (identified by their GTIN) and their PRC to ensure the correct claims.

Potential cost of manual PRC clarification by hospitals

PRC data was provided by three participants[4]. Results showed some positive matching (one file matching 41.5%), but overall results were considered inconclusive[5].

Participants indicated that accurate communication of the link between the GTIN and the PRC between suppliers and buyers is a significant issue, these are currently confirmed via phone calls from hospitals to sponsor (supplier) organisations. One participant claims their hospitals spend up to one hour per week per hospital phoning suppliers to verify codes.

Potential lost revenue from unclaimed joint replacement prostheses

The manual process of keeping the link between products and PRC up to date often means that rebatable items are not identified, leading to loss of revenue for the hospitals.

It is important to note that there are a large range of non-joint related prostheses, including stents, pacemakers and defibrillators. There would be additional savings should these product categories be studied.

OVERALL BUSINESS IMPLICATIONS

Conservative potential savings from improved data quality for all business processes met by the NPC data set

This study identified a potential saving of $30 million per annum for the Australian healthcare supply chain.

Another five areas of saving were identified but not qualified. The participants indicated that, overall savings and efficiencies from improved data would be greater than AU$100 million per annum at a conservative estimate.

THE FUTURE

All participants in this project have communicated their vision for the future involving an electronically enabled healthcare supply chain. There has also been quantification of the time taken to advise trading partners of a single new product via various mechanisms, as detailed in Chart 1.

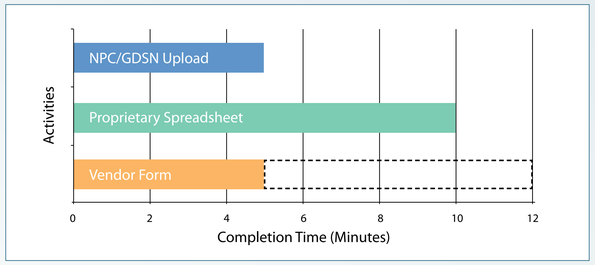

Chart 1: New product communication activities

The aim of the Healthcare Industry Data Crunch report is to focus industry attention on the need for continual data quality improvement. The costs of inactivity and accepting poor-quality data as the norm are unacceptable.

The project participants call on all Australian healthcare companies to adopt the NPC and work together to improve product data quality for supply chain efficiency and patient safety.

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[1] Integrated means the supplier automatically pushes electronic messages containing changed data or new products to the NPC and the buyer receives automatic updates (via electronic messaging) of this changed or new data.

[2] Refer: GDSN Package Measurement Rules, GS1 Standards Document Issue 1.11.1, Jun-2011.

[3] Refer: *http://www.health.gov.au/internet/main/publishing.nsf/Content/health-privatehealth-prostheseslist.htm*

[4] It should be noted that this field only applies to a subset of products from some participants.

[5] There is potential for incomplete data, as some products requiring a prostheses rebate code may not have had this included in the data files provided.